

December 18, 2014

## On the Results of Examining the Future Shape of the Zengin System

Japanese Bankers Association  
Japanese Banks' Payment Clearing Network

### 1. Zengin System Extended Operating Hours

#### (1) Purpose and objective

- Building on the “Japan Revitalization Strategy, revised in 2014—Japan’s challenge for the future” (growth strategy) announced in June 2014, trends in foreign nations, and recent developments such as the spread of new payment services using information technology, Japan’s banking industry will provide a globally advanced payment service by realizing the 24/7 operation of the Zengin System, the core system of bank-mediated credit transfers, so as to upgrade the payments infrastructure, energize the economy, and improve the lives of citizens.

#### (2) Results of surveying domestic needs

- While there were respondents with the view that the current situation is not overly inconvenient or that needs for the late-night to early-morning period are low and that there are safety concerns such as the increased potential for experiencing financial crime, we were able to verify that both individuals and companies have considerable need for real-time payments for the evening to night period on weekdays and for Saturdays, Sundays, and holidays.
- As for situations for making credit transfers during nighttime on weekdays or on Saturdays, Sundays, and holidays, we were able to verify specific examples, such as making real-time payments for Internet shopping or Internet auctions or making remittances for sudden situations like weddings, funerals, and other ceremonial occasions. There was also the view that payments can be verified, providing a sense of confidence.

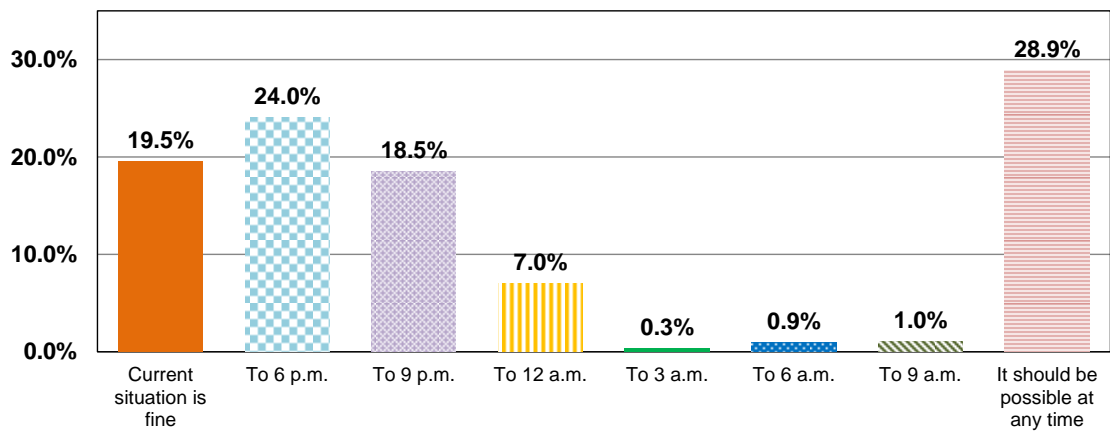
A. Individuals

Target: Individuals nationwide (responses are adjusted according to the demographic structure)

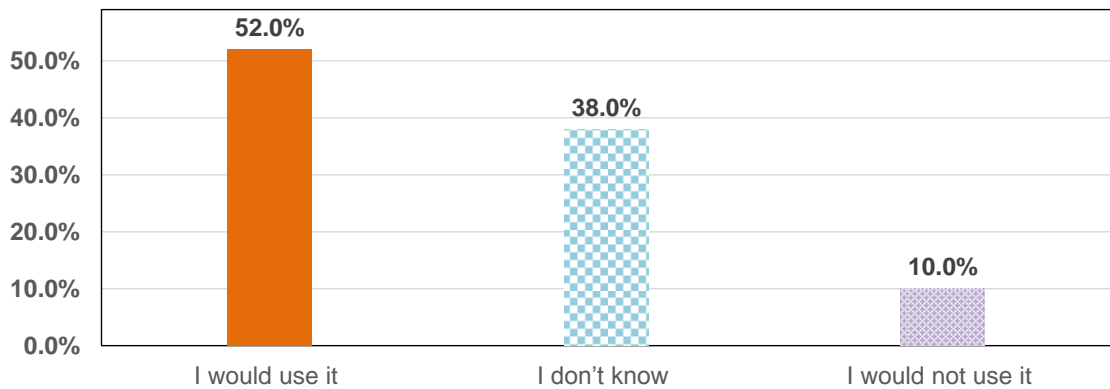
Sample size: 3,000

Survey period: July 2014

a) Time Period Where Real-Time Payments Is Desired



b) Preferences for Credit Transfers (Real-Time Payments) During Nighttime or on Saturdays, Sundays, and Holidays



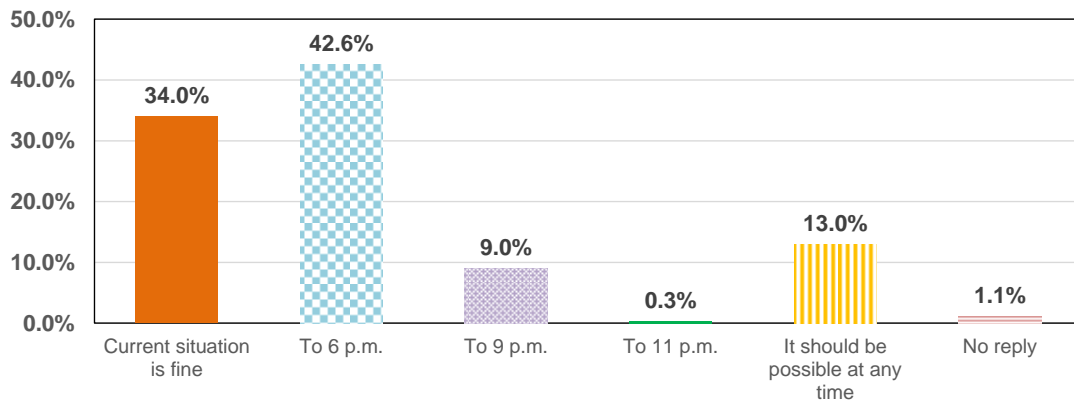
## B. Companies

Target: Companies nationwide (sampled by industry for each geographic block of the Economic Census and by size of the head office)

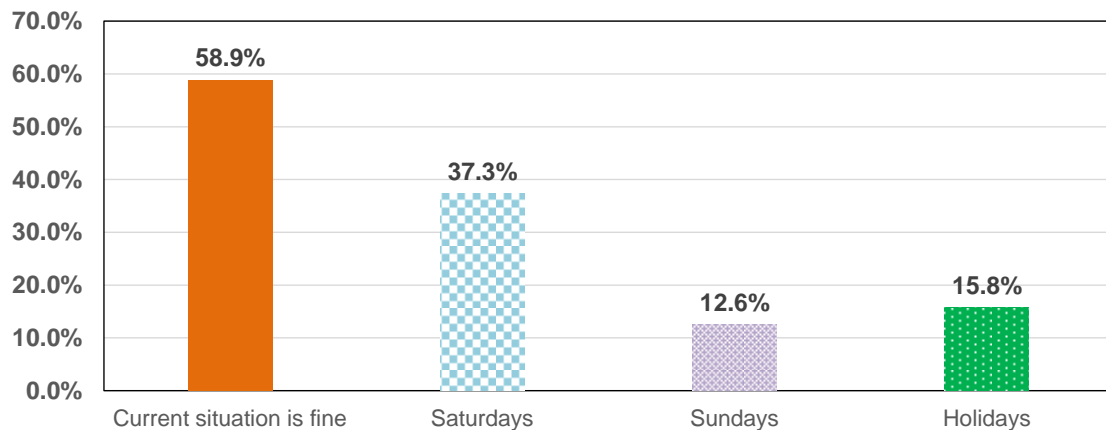
Sample size: 500

Survey period: July 2014

### a) Needs for the Evening to Night Period on Weekdays



### b) Needs for Saturdays, Sundays, and Holidays



Note: Since multiple replies were possible, percentage totals exceed 100%.

### (3) Building a platform for 24/7 operation

By extending the functions of the Zengin System through development of a separate system, operating hours will be extended to include Saturdays, Sundays, and holidays

- As a method for realizing 24/7 operation of the Zengin System, in addition to the current Zengin System with operating hours of 8:30 to 15:30 on weekdays and 7:30 to 16:30 on the final day of the month, a new platform separate from the main

system will be built to cover such time period when payments were not processed as the evening to night period on weekdays and Saturdays, Sundays, and holidays where considerable unmet needs exist for both individuals and companies. As a result, the existing main system and the new platform together will operate on a 24/7 basis and will establish an environment where real-time credit transfers to other banks will become possible.

#### Image of the 24/7 Platform of the Zengin System

Time period	Weekdays	Saturdays, Sundays, and holidays
0:00 to 8:30		<p><b>Newly extended operating hours</b></p> <ul style="list-style-type: none"> <li>• To realize 24/7 operation, a new platform will be built separate from the main system.</li> <li>• Connection time will be determined by each member bank based on customer needs (further examination will be made of establishing certain common operating hours). Participation and connection will begin as member banks become ready.</li> <li>• Envisioned mainly for credit transfers using Internet banking.</li> <li>• Real-time payments between connected member banks are realized.</li> </ul>
8:30 to 15:30	<p><b>Current operating hours</b></p> <ul style="list-style-type: none"> <li>• Current hours where all member banks are required to be connected.</li> <li>• Real-time payments are possible between all member banks.</li> <li>• Current operating hours will be maintained by the main system.</li> </ul>	
15:30 to 24:00		

- While all member banks are required to be connected during the current period of operating hours, uniform responses will not be required of all member banks for the newly extended period of operating hours. Rather, individual member banks will determine the time period they will connect based on customer needs.
- Regarding the establishment of a certain time period to cover the needs of individuals and companies (for example, a certain period after 15:30 on weekdays), the banking industry will examine a framework to satisfy customer needs, such as extending the period of operating hours where all member banks connect to the new platform.
- The condition for completing real-time payments during newly extended operating hours is banks making credit transfers (sending banks) and banks receiving credit transfers (receiving banks) both being connected to the new platform at the same time. For this reason, many member banks will be encouraged to connect to the new platform for a longer period than the defined time period noted above to include

Saturdays, Sundays, and holidays, and thus the time period where real-time payments are possible between connected member banks will extend.

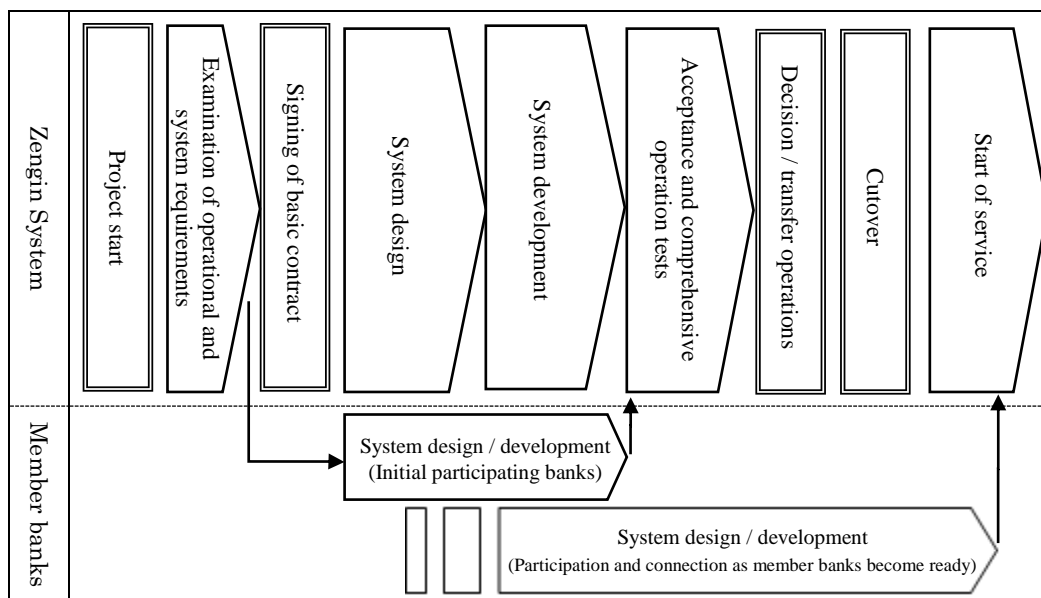
- Since connection times will differ by member bank during newly extended operating hours, when the customer of a bank requesting a credit transfer (sending bank) implements a credit transfer, it may be unclear whether this will be a real-time payment or a payment made at the earliest time on the morning of the next business day (whether it will be handled as a credit transfer reservation). From the perspective of customer clarity, this situation should be handled by each member bank (sending bank side) taking such measures as indicating on the screen when receiving credit transfers during Internet banking. In addition, an examination will be made to further increase usability, such as examining a scheme for minimizing credit transfer errors (processing failure at receiving banks).
- Also, in time periods when the bank to receive the credit transfer (receiving bank) is not connected to the new platform, it is envisioned that the new platform will reserve the electronic credit transfer message received from the bank requesting the credit transfer (sending bank), and when the receiving bank connects to the new platform, payment will be promptly made (for receiving banks not participating in the new platform, payment will be possible at the earliest time on the morning of the next business day [around 8:30]).
- The new platform will mainly concern credit transfers using Internet banking, and it will not necessarily require extending the operating hours of bank branches.

#### (4) Start of service

- Regarding the start of service, a roadmap will be established bearing in mind the need to provide service as early as possible, and steady efforts will be made toward early realization.
- At the present moment, a full-fledged examination of operational and system requirements will begin in early 2015, with the aim to begin service in 2018. Regarding the timing for the formal start of service, it will be determined after examining these requirements by examining when the development of the new platform will be completed and by considering safety and reliability issues such as by verifying the completeness of acceptance and comprehensive operation tests.

- Regarding the participation of member banks in the new platform, it is expected that many member banks will participate from the start. However, since preparation times will differ by member bank, such as regarding the system development situation and administrative preparations, a framework will be examined where member banks can participate, connect, and extend their connection time as they become ready following cutover.

### Steps to Realization (Overview)



### (5) Future responses

- A project for building the new platform will be established within the administrative office of the Zengin-net to begin specific examinations. In addition, a unit for examining the extension of the operating hours of the Zengin System will be established within the Zengin-net to manage the progress of the project and to examine various issues related to the extension of operating hours.
- In building the new platform, we will closely examine future steps toward its realization and establish a schedule and action plan toward realization. In this process, our examination will fully consider the system development of member banks and the time period, etc. for connecting to the new platform.
- Regarding the development of the new platform, the development plan will be

decided after examining specific operational and system requirements, and system development will begin after concluding a basic contract on system development with the system vendor.

- With the extension of the operating hours of the Zengin System, regulations on the handling of credit transfers between member banks will be revised in part as needed, and basic matters regarding the operation of the new platform will be examined.
  
- Once the new platform begins operating and when credit transfers to other banks become possible between connected member banks during the evening or later on weekdays and on Saturdays, Sundays, and holidays, it is thought that the timing for determining when bills of exchange are dishonored will continue to be established by individual banks in light of various deadlines related to the clearing of bills, given that the deadline for returning dishonored bills and the time needed to deliver bills differ by clearinghouse and given the legal perspective. Regarding this matter, consideration will be given to preventing the extension of operating hours from confusing customers such as by having banks widely publicize their responses to their customers as needed.

## **2. Use of Financial EDI**

### (1) Purpose and objective

- Building on Study Group Report on the Enhancement of Corporate Payment Services published in April 2012 and on Japan's growth strategy, there is a need for Japan's banking industry to liaise with industry and examine the use of financial electronic data interchange (EDI)<sup>1</sup> with the view to upgrade the payments infrastructure and improve the productivity of companies.

### (2) Survey of domestic needs

- In examining the use of financial EDI, since it will be essential to understand the needs of industry that will actually use it, a questionnaire survey was carried out together with related ministries and agencies and with the cooperation of the Keidanren, which drew responses from 59 industry groups and 201 companies as of December 1. Of the companies responding, those with sales of JPY100 billion or more exceeded 60%, and those with sales between JPY10 billion and JPY100 billion exceeded 20%.

#### A. Usage situation, needs, and effect of commercial EDI and financial EDI

- The replies received from companies indicated that the combined total of companies using either commercial EDI or financial EDI or both (here and subsequently, including companies examining such use) and companies interested in using EDI although they are not doing so now surpassed 70% of all respondents, confirming the need for using commercial EDI or financial EDI (including potential need) (needs tended to be higher as the size of companies' sales increased). In addition, most of the companies actually using commercial EDI or financial EDI responded that there was a business efficiency effect, making it clear that the use of commercial EDI or financial EDI contributes to increasing the efficiency of business

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1. In this report, electronic data interchange (EDI) is divided into two categories as defined below.

- Commercial EDI: EDI where such commercial information as orders sent and received and invoices are exchanged and shared between companies through communications networks using electronic data.
- Financial EDI: EDI for supplementing credit transfer data with such commercial data as orders sent and received and invoices. Up to 20 digits can be entered in the credit transfer EDI data column.



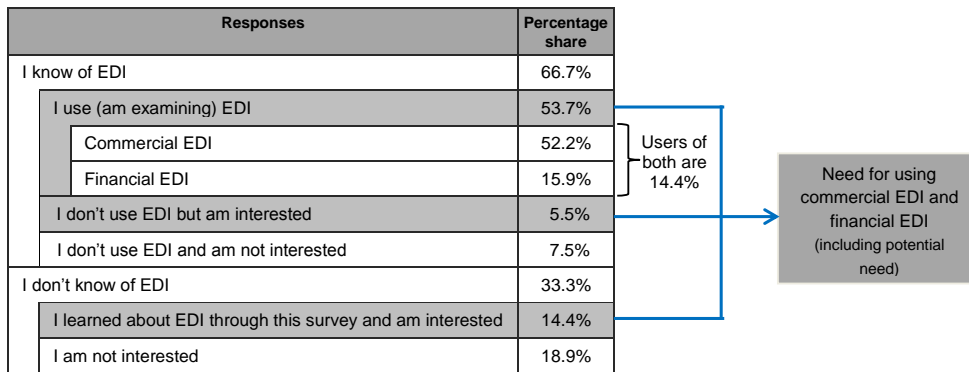
operations.

#### B. Toward the use of financial EDI

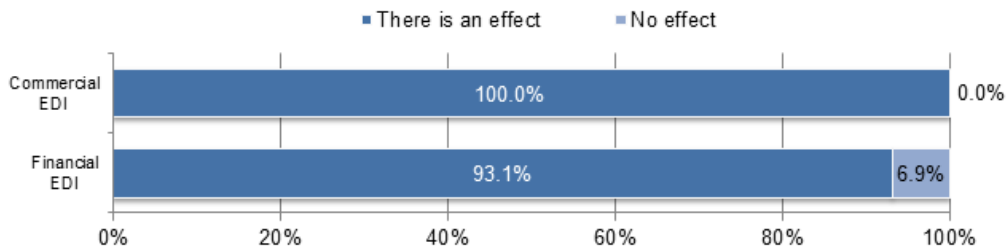
- One of the main benefits of using financial EDI is the facilitation of accounts receivable reconciliation. Many companies, however, performed reconciliation using the functions of accounting software (including their own computer systems), using such data as “name of credit transfer requester,” “amount,” and “credit transfer date” as collating keys, and 50% of reconciliation remained a manual process. Many companies raised as an issue the need to compare invoice details with payments received when one company sends multiple invoices (combined credit transfers). As a result, reconciliation represented a considerable burden, with more than 20% of companies expending 50 hours or more a month on reconciliation. In particular, this burden tended to be high for large companies receiving many credit transfers. Meanwhile, companies using financial EDI to link commercial EDI with payment information came to less than 10% of companies using commercial EDI, and the 60% of companies not engaged in linking did not feel a need to link from a cost-benefit perspective. It will be necessary to examine cost effectiveness toward the use of financial EDI. For example, this issue should be clarified with reference to verification performed through a joint system test as is discussed below.
  
- There is the view that the number of digits used in financial EDI should be increased from the current 20 in response to XML. Of the companies utilizing financial EDI, however, less than 20% use accounting systems where XML electronic messages are possible, and most take a cautious stance toward the additional cost burden, such as the investments needed to make company computer systems compatible with the XML format.
  
- Examining the usage situation for commercial EDI and financial EDI, the number of companies using only financial EDI is limited, indicating that the greater use of commercial EDI will be a key factor for the use of financial EDI. Regarding this point, while more than 60% of the companies using commercial EDI use industry-defined standard formats, more than 60% also use multiple formats for such reasons as the request of payer companies (order-placing companies) or involvement of different industry groups. More than 70% of companies replied that a standard EDI is needed that is not limited to one industry, indicating the strong

need for industry-wide standardization. In realizing industry-wide standardization, however, many companies are concerned about the operational burden or such system-related costs as development and maintenance, and an industry-wide effort is desirable.

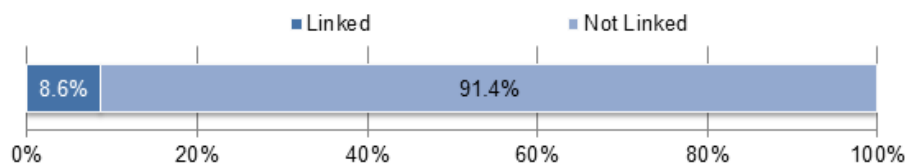
### EDI Awareness and Use by Companies



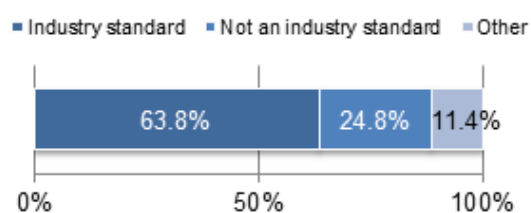
### Business Efficiency Effect of Commercial EDI and Financial EDI



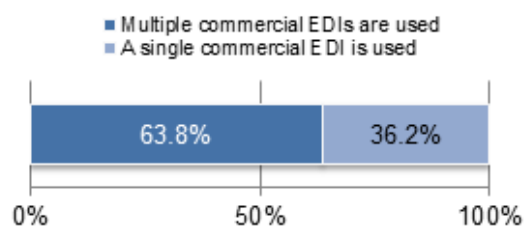
### Linking Commercial EDI and Payment Data through Financial EDI (Question for companies using commercial EDI)



### Standardization of Commercial EDI



### Use of Multiple Commercial EDIs



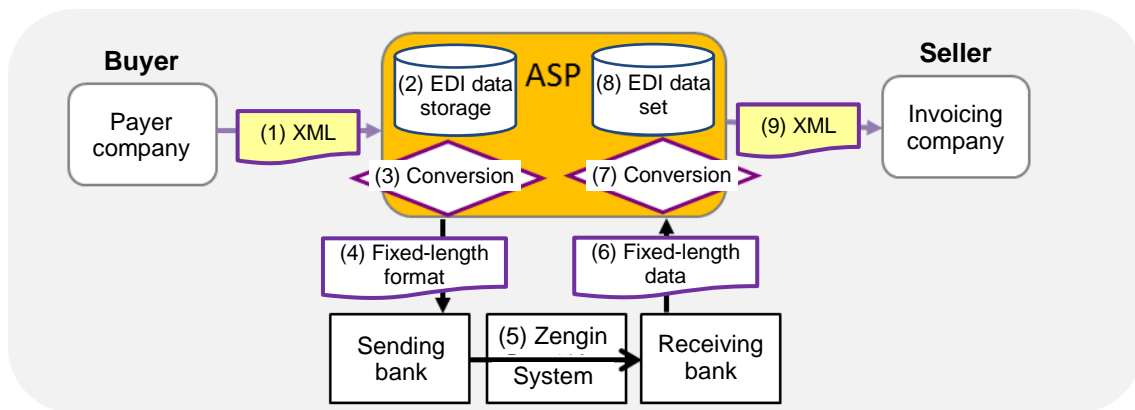
### (3) Joint System Test by the Distribution Industry and Financial Institutions

- To verify the efficiency gains for the payment operations (accounts receivable reconciliation) of the distribution industry should the linkage of commercial information and payment information (expansion of supplementary EDI information) be realized, the distribution industry and financial institutions carried out a joint system test in November, in which seven companies and three banks participated.
- The joint system test did not supplement credit transfer data with commercial information. Rather, it was supplemented with reference information to enable linking with commercial information, and commercial information was managed through a separate application service provider (ASP). The electronic messages for sending and receiving credit transfer data used XML electronic messages between companies and the ASP and a fixed-length format between the ASP and banks. This scheme satisfied the needs of companies desiring to supplement payment information with data exceeding 20 digits in length, such as commercial EDI data, and represents a relatively small burden for banks with respect to computer system development, etc.
- Through this experiment, by using financial EDI to link commercial information and payment information, the name collation work to determine credit transfer originators and the collation work arising when credit transfer amounts differ from invoice amounts could be automated. As a result, we were able to confirm that linking commercial information and payment information through financial EDI would yield business efficiencies, such as reducing by 50% to 70% the work of reconciling accounts receivable for manufacturers and wholesalers and the work of reconciling sales rebates for retailers. There was, however, no effect in increasing efficiency for companies whose workflow consisted of using payment notifications to

reconcile accounts receivable before such payments were received.

- We were also able to verify that our scheme of newly developing an ASP would function as anticipated and that this would be a possible choice worth investigating toward its realization.

#### Image for Implementing the Joint System Test



#### (4) Future responses

- While the effectiveness of the use of financial EDI was made clear through a survey of domestic needs and a joint system test, future issues were also highlighted. Bearing these issues in mind, we will deepen the exchange of views about and the examination of the following points with the distribution industry as well as with the organizations and companies of different industries, with system vendors of EDI and accounting solutions, and with persons with expert knowledge.
- Examination toward realizing the use of financial EDI (linkage of commercial EDI and payment information)
- Examination and verification of realization schemes, including cost effectiveness and cost allocation
- Responses by industry toward industry-wide standardization of commercial EDI